APPROVED MEETING MINUTES
SOUTH CAROLINA SHORELINE CHANGE ADVISORY COMMITTEE
Topic: Beach Renourishment
March 31, 2008 – 9:30am-5:00pm

This document is not intended to be a meeting transcript, *per se*. It is a summary of key themes and some (though not all) of the background dialogue. The meeting summary's structure roughly parallels that of the meeting agenda but is not necessarily true to the temporal order of discussion. A digital recording of the meeting is located at SCDHEC-OCRM's Charleston office.

In Attendance:

1) Advisory Committee members:

Jeff Allen,	Clemson University
Sara Brown,	U.S. Army Corps of Engineers
Jimmy Carroll,	Carroll Realty
Marc Cherry,	Gramling Brothers, Inc. – *alt. for Ben Gramling*
Mary Conley,	The Nature Conservancy
Toni Connor-Rooks,	City of Folly Beach
Paul Conrads,	U.S. Geological Survey
Hamilton Davis,	S.C. Coastal Conservation League
Rick DeVoe,	S.C. Sea Grant Consortium
Paul Gayes,	Coastal Carolina University
Tina Hadden,	U.S. Army Corps of Engineers
Tim Hall,	U.S. Fish & Wildlife Service
Scott Harris,	College of Charleston
Jim London,	Clemson University
Tara Miller,	NOAA Coastal Services Center – *alt. for Jeff Payne*
Aaron Pope,	City of Folly Beach – *alt. for Toni Connor-Rooks*
Linda Tucker,	City of Isle of Palms
Bob Van Dolah,	S.C. Department of Natural Resources

2) Guest Speakers:

Derk Bergquist,	S.C. Department of Natural Resources
Tim Kana,	Coastal Science and Engineering, Inc.

3) S.C. Department of Health & Environmental Control:

Sean Briggs,	OCRM Enforcement/Compliance Project Manager
Braxton Davis,	OCRM Science & Policy Director
Shawn Kiernan,	OCRM Senior Coastal Planner
Tanitra Marshall,	OCRM Myrtle Beach Office Team Leader & Wetland Permitting
Barbara Neale,	OCRM Regulatory Director
Marvin Pontiff,	OCRM Assistant Deputy Commissioner
Melissa Rada,	OCRM Science & Policy Program Coordinator
Matt Slagel,	NOAA Coastal Management Fellow
Chris Stout,	OCRM Wetland Permitting Project Manager

4) S.C. Office of Human Resources

Nathan Strong,	Facilitator

Welcome and Introductions:

Braxton Davis, Director of OCRM's Science & Policy Division, provided a brief overview of the Shoreline Change Initiative and the purpose of the Advisory Committee. He reiterated that the charge of the Committee is to identify research and information needs and priorities and to explore policy options for improved beachfront and estuarine shoreline management in South Carolina. To date, there have been two orientation meetings focused on OCRM authorities and activities, the Committee work plan and process, and shoreline management in other states. The Committee has also examined research and information needs and South Carolina's policy of retreat. The Committee approved the minutes from the meeting on February 21, 2008 (the final minutes are now posted on the Shoreline Change Advisory Committee website). Dr. Davis then discussed some lessons learned so far from the draft policy option templates that subcommittees began working on after the last meeting. A key reminder for the subcommittees is to focus the templates around one clear, central idea that addresses a perceived problem with current shoreline management in South Carolina. The policy options will be included in a final report at the conclusion of the Committee's work.

Presentations:

The following presentations are available on the Shoreline Change Advisory Committee website: http://www.scdhec.gov/environment/ocrm/science/shoreline_comm_0308.htm

The Roles of the U.S. Army Corps of Engineers in Beach Nourishment
Tina Hadden and Sara Brown, Charleston District

Question and Answer session with Tina Hadden and Sara Brown:

Q- What are the nationwide costs of renourishment, and what are the cost shares involved?
A- The cost share for a hurricane and storm damage reduction project is 50% federal, 50% local for the study costs and that can vary depending on the complexity of the area. Much of the cost depends on what information is available and the borrow area characteristics. Sand search studies are very costly when compared to using a borrow area or sand source that is already well known. Regarding nationwide renourishment costs, Ms. Brown did not have these numbers but offered to search for this information and provide it to the group at a later time. The cost share for construction of a project is 65% federal, 35% local.

Q- How much of the study and construction process gets short-circuited after a major storm event, especially when local funding is not available?
A- In emergency situations, the USACE can perform a temporary fix when a governor declares a state of emergency. This usually involves some form of sand scraping, and it is not intended as a permanent fix.

Q- How broadly has the Beach-*fx* model been applied?
A- The model has only been out for about 2-3 years. It has a wide range of applications, but it has mainly been used for hurricane and storm damage reduction so far.

Experiences with Beach Nourishment in South Carolina
Tim Kana, Coastal Science and Engineering, Inc.

Question and Answer session with Tim Kana:

Q- Why has nourishment been somewhat ineffective on some beaches in South Carolina? Is it because the scale of some projects is too small or because nourishment can't solve the erosion problem in some areas?
A- In many areas, nourishment projects have been "too little, too late" meaning sand volumes placed on the beach were not large enough and/or erosion of the beach was already too severe. About 25 years ago, nourishment was performed on a pay as you go, experimental basis, and monitoring was not done as densely or out to closure as it is today. Some failures could also be attributed to a lack of experience since the more times nourishment projects are attempted, the greater the chance of success and learning what works and what doesn't work.

Q- Are there enough borrow sites offshore to sustain renourishment in South Carolina?
A- Yes, we don't have the lack of sand problems that other areas such as Florida are facing. Ebb tidal deltas contain tremendous volumes of sand.

Q- At what rate of sea level rise or erosion is nourishment no longer an economical option?
A- The problem with sea level rise in South Carolina will be experienced inland along estuaries due to the low topography of barrier islands along the marsh edge. Some foreseen effects are increased flooding and transitional wetlands migrating into back yards. It is relatively inexpensive to keep pace with sea level rise along the beach because the berm height can be raised.

Q- What percentage of the state shoreline is accretional, not including renourishment projects?
A- 25% - Kiawah Island, Sullivans Island, Isle of Palms, parts of Hilton Head Island, and parts of Hunting Island.

Lessons Learned from Studies of Beach Nourishment in South Carolina
Derk Bergquist and Bob Van Dolah, SC Department of Natural Resources

Question and Answer session with Derk Bergquist:

Q- As sand is taken from borrow sites offshore, do the borrow sites always fill back in with fine sediments instead of sand?
A- Typically, borrow sites at the northern ends of barrier islands near inlets in South Carolina collect mostly fine sediments, but borrow sites near southern ends of islands do not. Unfortunately, nourishment projects at the northern ends of islands are not near the ideal offshore borrow areas at the southern ends. When borrow sites at the northern ends of barrier islands are used, the dredge pit depth should be reduced.

Q- A borrow site about 3 nautical miles offshore of Surfside/Garden City filled very quickly with sediment recently. Has SCDNR surveyed this area?
A- This area is not being monitored at this time.

The Roles of the U.S. Fish and Wildlife Service in Beach Nourishment
Tim Hall and Mark Caldwell, USFWS Charleston

Question and Answer session with Tim Hall:

Q- Shoals at the southern ends of barrier islands in South Carolina are good sources of sand, but they are in Coastal Barriers Resources Act zones- can this sand be used for nourishment purposes?
A- The Coastal Barriers Resources Act was intended to protect from federal subsidies assisting development. Using the sand but not actually developing on it is a policy that needs to be examined further.

Facilitated Discussion:

Nathan Strong, Facilitator for the Shoreline Change Advisory Committee, led the Committee members in a discussion of potential policy options relating to beach renourishment that they would like to explore and develop with draft templates. The complete lists of potential policy options that were generated are below.

NOTE: This DOES NOT infer that any one or all of the Committee members are supportive of any of these ideas at this stage. This exercise was intended to allow for open "brainstorming" of ideas - even ideas that may not seem possible or preferable on the surface, to help foster discussions among the Committee.

- Place limits on the transfer of sand in the nearshore system
  - (e.g. sand conflict rules/planning)

- Set standard that renourishment should bring new sediment into system rather than moving it around the system
  - (e.g. no beach mining in Standard Zones)

- Require re-use of nearshore borrow sites

- Establish inlet (relocation/realignment) management zones and plans

- Require mitigation of projects that result in long-term adverse impacts
    - (e.g. environmental, down-drift, etc.)

- Recommend advance planning for specific renourishment projects so that emergency situations do not suffer from delays or limited regulatory reviews

- Recommend advance planning, on a regional basis, for borrow sites
    - (e.g. consider 100-year time horizon, regional sediment management, funding sources)

- Explore potential dedicated funding mechanisms for beach renourishment
    - (e.g. tie accommodations taxes to beach nourishment planning)

- Require beneficial re-use of dredged materials for state-permitted projects (where possible)

- Consider management options for areas with renourishment-fed accretion and down-drift communities

- Develop approved list of compatible upland sources relative to emergency projects
    - (e.g. pre-approval, standard practices for evaluating these resources)

- Propose regular schedule for renourishment- economically beneficial even if ahead (related to baseline/retreat)

- Lift or modify restrictions requiring public access for federal or state renourishment funds
    - (e.g. difficult to leave out portions of beach in a systematic approach)

- Create/fortify/restore marsh areas with non-compatible sources of sediment via thin layer disposal

- Limit the spectrum of acceptable sediment compatibility placed on SC beaches
    - (e.g. set a narrower standard that is tied to performance)

- Expand and improve the monitoring of project performance
    - (e.g. develop standards for post-project assessment and reporting)

Decisions on Policy Options to Explore:

Once the lists of potential policy options were generated, the Committee members used "dot votes" to prioritize the options. The prioritization and synthesis of the potential policy options revealed five key issues that the Committee would like to explore further. The policy options selected for full "template" development, and the volunteer subcommittees associated with each option, are as follows:

1) Recommend advance planning, on a regional basis, for borrow sites

- This includes considering a 100-year time horizon, exploring regional sediment management, and determining funding sources for research and data acquisition to support this effort.
    - Aspects of regional sediment management to be explored include requiring beneficial re-use of dredged materials where possible and setting a narrower standard for acceptable sediment grain sizes and other characteristics placed on South Carolina beaches

Subcommittee Lead: Sara Brown
Scott Harris
Hamilton Davis
Tina Hadden

2) Set standard that renourishment brings new sediment into system

- This includes disallowing mining and scraping of beaches in Standard Zones, and establishing inlet (relocation/realignment) management zones and plans.

Subcommittee Lead: Paul Gayes
Mike Katuna
Bob Van Dolah
Chris Mack

3) Explore potential dedicated funding mechanisms for beach renourishment

- This could include tying accommodations taxes to beach nourishment planning and lifting or modifying the restrictions requiring public access for federal or state funds.

Subcommittee Lead: TBD
Jimmy Carroll
Marc Cherry
Rick DeVoe
Jim London

4) Recommend advance planning for specific renourishment projects

- This would help prevent emergency situations from suffering through delays and limited regulatory reviews.

Subcommittee Lead: Hamilton Davis

Jeff Allen
Tara Miller

5) Expand and improve monitoring of renourishment project performance

- This includes developing standards for post-project assessment and reporting.

Subcommittee Lead: Bob Van Dolah
Paul Gayes
Tim Hall

Any members of the Committee who were absent from this meeting and would like to participate on one or more of the subcommittees are encouraged to contact Braxton Davis and the members in that working group.

Public Comment Period:

There were no oral public comments submitted at this meeting. Members of the public were in attendance but indicated their preference to submit written comments at a later date.

Future Meeting Schedule:

Next meeting: Beach Armoring; May 8, 2008

Place: SCDHEC-OCRM, 1362 McMillan Avenue, Charleston, SC

Format: Meeting during day, followed by public comment period

Next Steps and Agreements:

1) The next meeting, "Beach Armoring," will take place on **May 8, 2008** in Charleston. This meeting will be followed by a public comment period.

2) A date for the seventh meeting has not yet been finalized, but this will be done over email.

3) Committee members who arrived late to the meeting or who were unable to attend are encouraged to get in touch with OCRM to listen to the full audio transcript, which is available in OCRM's Charleston office.

4) Submitted written public comment materials will be distributed to Committee members. Oral public comments are described in the meeting minutes. All public comments will be available in full at OCRM's Charleston office.

5) Prior to the next meeting, OCRM will send the Committee "homework" reading materials, an agenda for the May 8 meeting, potential dates for future meetings, and draft meeting minutes for review.

6) Meeting materials including presentations and approved minutes will be posted: http://www.scdhec.gov/environment/ocrm/science/shoreline_comm.htm